# RETAINING COMPOUND HEAT-RESISTANT - 50 G

| Version | Revision Date: | SDS Number: | Date of last issue: 25.11.2016 |
|---|---|---|---|
| 6.1 | 14.02.2017 | 536364-00006 | Date of first issue: 11.06.2010 |

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name : RETAINING COMPOUND HEAT-RESISTANT - 50 G

Product code : 0893620050

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Adhesives

### 1.3 Details of the supplier of the safety data sheet

Company : Adolf Wuerth GmbH & Co. KG
Reinhold-Würth-Str. 12-17
74653 Künzelsau

Telephone : +49 794015 0

Telefax : +49 794015 10 00

E-mail address of person responsible for the SDS : prodsafe@wuerth.com

### 1.4 Emergency telephone number

Giftnotrufzentrale Berlin +49 30 30686 790. Gesellschaft (07:00 – 18:00 Uhr) +49 794015 2552

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

| | |
|---|---|
| Serious eye damage, Category 1 | H318: Causes serious eye damage. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :

Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

Precautionary statements :

**Prevention:**

P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:

(2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl triacrylate
Methacrylic acid, monoester with propane-1,2-diol
[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate
Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol
2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate

### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| (2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl triacrylate | 40220-08-4<br>254-843-6 | Eye Dam. 1; H318 | >= 10 - < 20 |
| Methacrylic acid, monoester with propane-1,2-diol | 27813-02-1<br>248-666-3 | Eye Irrit. 2; H319<br>Skin Sens. 1; H317 | >= 1 - < 10 |
| [2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate | 20882-04-6<br>244-096-4 | Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Skin Sens. 1; H317 | >= 3 - < 10 |
| Cumene hydroperoxide | 80-15-9<br>201-254-7<br>617-002-00-8 | Org. Perox. E; H242<br>Acute Tox. 4; H302<br>Acute Tox. 3; H331<br>Acute Tox. 2; H310<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318 | >= 0,25 - < 1 |

| | | | |
|---|---|---|---|
| | | STOT SE 3; H335<br>STOT RE 2; H373<br>Aquatic Chronic 2; H411 | |
| Tri-n-butylamine | 102-82-9<br>203-058-7 | Acute Tox. 4; H302<br>Acute Tox. 1; H330<br>Acute Tox. 2; H310<br>Skin Irrit. 2; H315 | >= 0,1 - < 1 |
| 2'-Phenylacetohydrazide | 114-83-0<br>204-055-3 | Acute Tox. 3; H301<br>Acute Tox. 3; H311<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>Carc. 2; H351<br>Aquatic Acute 1; H400 | >= 0,25 - < 1 |
| Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | 28961-43-5<br>500-066-5<br>01-2119489900-30 | Eye Irrit. 2; H319<br>Skin Sens. 1; H317 | >= 0,1 - < 1 |
| 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate | 52628-03-2<br>258-053-2 | Flam. Liq. 3; H226<br>Skin Corr. 1A; H314<br>Eye Dam. 1; H318<br>Skin Sens. 1B; H317 | >= 0,1 - < 1 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.
Get medical attention immediately.

| | | |
|---|---|---|
| If swallowed | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention.<br>Rinse mouth thoroughly with water. |

### 4.2 Most important symptoms and effects, both acute and delayed

| | | |
|---|---|---|
| Risks | : | May cause an allergic skin reaction.<br>Causes serious eye damage. |

### 4.3 Indication of any immediate medical attention and special treatment needed

| | | |
|---|---|---|
| Treatment | : | Treat symptomatically and supportively. |

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media | : | None known. |

### 5.2 Special hazards arising from the substance or mixture

| | | |
|---|---|---|
| Specific hazards during fire-fighting | : | Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides<br>Nitrogen oxides (NOx)<br>Sulphur oxides |

### 5.3 Advice for firefighters

| | | |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment. |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| Personal precautions | : | Use personal protective equipment.<br>Follow safe handling advice and personal protective equip- |

ment recommendations.

### 6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.
Avoid inhalation of vapour or mist.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice.
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Keep tightly closed. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types: Strong oxidizing agents

Storage class (TRGS 510) : 10, Combustible liquids

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Silicon, amorphous | 112945-52-5 | AGW (Inhalable fraction) | 4 mg/m3 (Silica) | DE TRGS 900 |
| Further information | Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., Colloidal amorphous silica, including pyrogenic silica and in wet processes manufactured silica (precipitated silica, silicagel)., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child | | | |

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Methacrylic acid, monoester with propane-1,2-diol | Workers | Inhalation | Long-term systemic effects | 14,7 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 4,2 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 8,8 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 2,5 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 2,5 mg/kg bw/day |
| 1,2-benzisothiazol-3(2H)-one 1,1-dioxide | Workers | Inhalation | Long-term systemic effects | 4,19 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 2,381 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 1,035 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 1,190 mg/kg bw/day |

| | | | | |
|---|---|---|---|---|
| | Consumers | Skin contact | Long-term systemic effects | 0,595 mg/kg bw/day |
| Cumene hydroperox-ide | Workers | Inhalation | Long-term systemic effects | 6 mg/m3 |
| Tri-n-butylamine | Workers | Inhalation | Long-term systemic effects | 15,2 mg/m3 |
| | Workers | Inhalation | Long-term local ef-fects | 15,2 mg/m3 |
| | Workers | Inhalation | Acute local effects | 15,2 mg/m3 |
| Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- pro-penyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | Workers | Inhalation | Long-term systemic effects | 16,2 mg/m3 |
| | Workers | Dermal | Long-term systemic effects | 0,8 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 4,9 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 0,5 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 1,4 mg/kg bw/day |
| 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate | Workers | Inhalation | Long-term systemic effects | 6,34 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 3,6 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 3,81 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 2,16 mg/kg bw/day |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Methacrylic acid, monoester with propane-1,2-diol | Fresh water | 0,904 mg/l |
| | Marine water | 0,904 mg/l |
| | Intermittent use/release | 0,972 mg/l |
| | Sewage treatment plant | 10 mg/l |
| | Fresh water sediment | 6,28 mg/kg |
| | Marine sediment | 6,28 mg/kg |
| | Soil | 0,727 mg/kg |
| 1,2-benzisothiazol-3(2H)-one 1,1-dioxide | Fresh water | 0,104 mg/l |
| | Marine water | 0,0104 mg/l |
| | Intermittent use/release | 1,044 mg/l |
| | Fresh water sediment | 104,403 mg/kg |
| | Marine sediment | 104,403 mg/kg |
| | Soil | 29,024 mg/kg |

| | | |
|---|---|---|
| | Sewage treatment plant | 12,304 mg/l |
| Cumene hydroperoxide | Fresh water | 0,0031 mg/l |
| | Marine water | 0,00031 mg/l |
| | Intermittent use/release | 0,031 mg/l |
| | Sewage treatment plant | 0,35 mg/l |
| | Fresh water sediment | 0,023 mg/kg |
| | Marine sediment | 0,0023 mg/kg |
| | Soil | 0,0029 mg/kg |
| Tri-n-butylamine | Fresh water | 0,0036 mg/l |
| | Marine water | 0,00036 mg/l |
| | Intermittent use/release | 0,036 mg/l |
| | Sewage treatment plant | 100 mg/l |
| | Fresh water sediment | 1,69 mg/kg |
| | Marine sediment | 1,69 mg/kg |
| | Soil | 3,37 mg/kg |
| Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol | Fresh water | 0,00195 mg/l |
| | Marine water | 0,000195 mg/l |
| | Intermittent use/release | 0,0195 mg/l |
| | Sewage treatment plant | 10 mg/l |
| | Fresh water sediment | 0,0082 mg/kg |
| | Marine sediment | 0,00082 mg/kg |
| | Soil | 0,00587 mg/kg |
| | Oral (Secondary Poisoning) | 5,6 mg/kg food |
| 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate | Fresh water | 0,068 mg/l |
| | Marine water | 0,0068 mg/l |
| | Intermittent use/release | 0,68 mg/l |
| | Sewage treatment plant | 0,546 mg/l |
| | Fresh water sediment | 0,481 mg/kg |
| | Marine sediment | 0,0481 mg/kg |
| | Soil | 0,0562 mg/kg |

### 8.2 Exposure controls

**Engineering measures**

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

**Personal protective equipment**

Eye protection : Wear the following personal protective equipment:
Chemical resistant goggles must be worn.
If splashes are likely to occur, wear:
Face-shield

Hand protection
- Material : Natural Rubber
- Break through time : 240 min
- Glove thickness : 0,6 mm
- Directive : DIN EN 374

| | | |
|---|---|---|
| Material | : | Nitrile rubber |
| Break through time | : | > 480 min |
| Directive | : | DIN EN 374 |
| Remarks | : | Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. |
| Skin and body protection | : | Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc). |
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. |
| Filter type | : | Combined particulates and organic vapour type (A-P) |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | liquid |
| Colour | : | green |
| Odour | : | characteristic |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | No data available |
| Flash point | : | > 100 °C<br>Other information: Ignitable (see flash point) |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Upper explosion limit / Upper | : | No data available |

| | | |
|---|---|---|
| flammability limit | | |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,1 g/cm3 (25 °C) |
| Solubility(ies) | | |
| Water solubility | : | partly miscible |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | 10.000 - 16.000 mPa.s (25 °C)<br>Method: Brookfield |
| Viscosity, kinematic | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |

### 9.2 Other information

| | | |
|---|---|---|
| Particle size | : | Not applicable |

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

| | | |
|---|---|---|
| Hazardous reactions | : | Can react with strong oxidizing agents. |

### 10.4 Conditions to avoid

| | | |
|---|---|---|
| Conditions to avoid | : | None known. |

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

**Cumene hydroperoxide:**

Acute oral toxicity : LD50 (Rat): 1.470 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 0,51 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement
Remarks: Based on harmonised classification in EU regulation

1272/2008, Annex VI

Acute dermal toxicity : LD50 (Rabbit): 133,6 mg/kg

**Tri-n-butylamine:**

Acute oral toxicity : LD50 (Rat): 420 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0,5 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 195 mg/kg

**2'-Phenylacetohydrazide:**

Acute oral toxicity : LD50 (Mouse): 270 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 300 - 2.000 mg/kg
Remarks: Based on data from similar materials

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 13.200 mg/kg

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : Assessment: Corrosive to the respiratory tract.

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Species: Rabbit
Result: No skin irritation

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

Result: Skin irritation

**Cumene hydroperoxide:**

Species: Rabbit

Result: Corrosive after 3 minutes to 1 hour of exposure

**Tri-n-butylamine:**

Species: Rabbit
Result: Skin irritation

**2'-Phenylacetohydrazide:**

Species: Rabbit
Result: Skin irritation
Remarks: Based on data from similar materials

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: Corrosive after 3 minutes or less of exposure

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Components:**

**(2,4,6-trioxo-1,3,5-triazine-1,3,5(2H,4H,6H)-triyl)tri-2,1-ethanediyl triacrylate:**

Result: Irreversible effects on the eye

**Methacrylic acid, monoester with propane-1,2-diol:**

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

Result: Irreversible effects on the eye

**Cumene hydroperoxide:**

Species: Rabbit
Result: Irreversible effects on the eye

**Tri-n-butylamine:**

Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

**2'-Phenylacetohydrazide:**

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Remarks: Based on data from similar materials

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Species: Rabbit
Method: OECD Test Guideline 405
Result: Irritation to eyes, reversing within 21 days

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Result: Irreversible effects on the eye
Remarks: Based on skin corrosivity.

**Respiratory or skin sensitisation**

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Species: Guinea pig
Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

Assessment: Probability or evidence of skin sensitisation in humans

**Tri-n-butylamine:**

Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Test Type: Buehler Test
Exposure routes: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: positive

Assessment: Probability or evidence of skin sensitisation in humans

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Test Type: Local lymph node assay (LLNA)
Exposure routes: Skin contact
Species: Mouse
Method: OECD Test Guideline 429
Result: positive

Assessment: Probability or evidence of low to moderate skin sensitisation rate in humans

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

**Cumene hydroperoxide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Skin contact
Result: negative

**Tri-n-butylamine:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

**2'-Phenylacetohydrazide:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: positive

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

: Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Species: Rat
Application Route: Inhalation
Exposure time: 102 weeks
Result: negative

**2'-Phenylacetohydrazide:**

Species: Mouse
Application Route: Ingestion
Exposure time: 2 years
Result: positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies (oral)

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rabbit<br>Application Route: Ingestion<br>Method: OECD Test Guideline 414<br>Result: negative |

**Tri-n-butylamine:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Reproduction/Developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 421<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 414<br>Result: negative |

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

| | | |
|---|---|---|
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative |

**STOT - single exposure**

Not classified based on available information.

**Components:**

**Cumene hydroperoxide:**

Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

Not classified based on available information.

**Components:**

**Cumene hydroperoxide:**

Exposure routes: inhalation (vapour)
Target Organs: Lungs
Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

**Repeated dose toxicity**

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Species: Rat
NOAEL: >= 300 mg/kg
Application Route: Ingestion
Exposure time: 49 Days
Method: OECD Test Guideline 422

**Cumene hydroperoxide:**

Species: Rat
NOAEL: 0,031 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 90 Days

**Tri-n-butylamine:**

Species: Rat
NOAEL: 1,2 mg/l
Application Route: inhalation (vapour)
Exposure time: 28 Weeks
Remarks: Based on data from similar materials

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Species: Rat
NOAEL: >= 200 mg/kg
Application Route: Skin contact
Exposure time: 16 Days
Remarks: Based on data from similar materials

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Species: Rat
NOAEL: 100 mg/kg
LOAEL: 300 mg/kg
Application Route: Ingestion
Exposure time: 28 Days

Method: OECD Test Guideline 407

**Aspiration toxicity**

Not classified based on available information.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): 493 mg/l<br>Exposure time: 48 h<br>Method: DIN 38412 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 143 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 97,2 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): >= 97,2 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC10 (Pseudomonas putida): 1.140 mg/l |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: 45,2 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211 |

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l<br>Exposure time: 96 h<br>Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 75 mg/l<br>Exposure time: 48 h<br>Remarks: Based on data from similar materials |
| Toxicity to algae | : | ErC50 (Desmodesmus subspicatus (green algae)): 38 mg/l<br>Exposure time: 72 h<br>Remarks: Based on data from similar materials<br><br>EC10 (Desmodesmus subspicatus (green algae)): 2,1 mg/l |

Exposure time: 72 h
Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 : 510 mg/l
Exposure time: 3 h
Remarks: Based on data from similar materials

**Cumene hydroperoxide:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3,9 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 18,84 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 3,1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

**Tri-n-butylamine:**

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 16,3 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 8 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): 8,2 mg/l
Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 1,4 mg/l
Exposure time: 72 h

Toxicity to microorganisms : NOEC (Nitrosomonas sp.): 100 mg/l
Exposure time: 2 h

**2'-Phenylacetohydrazide:**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 0,1 - 1 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): 1,95 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 70,7 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | : | ErC50 (Desmodesmus subspicatus (green algae)): 2,2 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms | : | EC50 : > 1.000 mg/l<br>Exposure time: 3 h<br>Method: OECD Test Guideline 209 |

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 112 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 68 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | : | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 120 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): 30 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |

### 12.2 Persistence and degradability

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 81 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301C |

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 70 %<br>Exposure time: 28 d |

Remarks: Based on data from similar materials

**Cumene hydroperoxide:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

**Tri-n-butylamine:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80,3 %
Exposure time: 29 d
Method: OECD Test Guideline 301B

**2'-Phenylacetohydrazide:**

Biodegradability : Result: Readily biodegradable.
Remarks: Based on data from similar materials

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 60 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 78,3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

### 12.3 Bioaccumulative potential

**Components:**

**Methacrylic acid, monoester with propane-1,2-diol:**

Partition coefficient: n-octanol/water : log Pow: 0,97

**[2-[(2-methyl-1-oxoallyl)oxy]ethyl] hydrogen succinate:**

Partition coefficient: n-octanol/water : log Pow: 0,783

**Cumene hydroperoxide:**

Partition coefficient: n-octanol/water : log Pow: 1,6

**Tri-n-butylamine:**

Partition coefficient: n-octanol/water : log Pow: 3,338

**Poly(oxy-1,2-ethanediyl), α-hydro-ω-[(1-oxo-2- propenyl)oxy]-, ether with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol:**

Partition coefficient: n-octanol/water : log Pow: 2,89

**2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, phosphate:**

Partition coefficient: n-octanol/water : log Pow: 1 - < 2,72

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

Waste Code : The following Waste Codes are only suggestions:

used product
080409, waste adhesives and sealants containing organic solvents or other dangerous substances

unused product
080409, waste adhesives and sealants containing organic solvents or other dangerous substances

uncleaned packagings
150110, packaging containing residues of or contaminated by dangerous substances

## SECTION 14: Transport information

**14.1 UN number**

Not regulated as a dangerous good

**14.2 UN proper shipping name**

Not regulated as a dangerous good

**14.3 Transport hazard class(es)**

Not regulated as a dangerous good

**14.4 Packing group**

Not regulated as a dangerous good

**14.5 Environmental hazards**

Not regulated as a dangerous good

**14.6 Special precautions for user**

Not applicable

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
Not applicable

Water contaminating class (Germany) : WGK 2 water endangering
Classification according VwVwS, Annex 4.

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial

emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 90 %, 990 g/l
Remarks: VOC content excluding water

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

**Full text of H-Statements**

| | | |
|---|---|---|
| H226 | : | Flammable liquid and vapour. |
| H242 | : | Heating may cause a fire. |
| H301 | : | Toxic if swallowed. |
| H302 | : | Harmful if swallowed. |
| H310 | : | Fatal in contact with skin. |
| H311 | : | Toxic in contact with skin. |
| H314 | : | Causes severe skin burns and eye damage. |
| H315 | : | Causes skin irritation. |
| H317 | : | May cause an allergic skin reaction. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H330 | : | Fatal if inhaled. |
| H331 | : | Toxic if inhaled. |
| H335 | : | May cause respiratory irritation. |
| H351 | : | Suspected of causing cancer if swallowed. |
| H373 | : | May cause damage to organs through prolonged or repeated exposure if inhaled. |
| H400 | : | Very toxic to aquatic life. |
| H411 | : | Toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Acute | : | Acute aquatic toxicity |
| Aquatic Chronic | : | Chronic aquatic toxicity |
| Carc. | : | Carcinogenicity |
| Eye Dam. | : | Serious eye damage |
| Eye Irrit. | : | Eye irritation |
| Flam. Liq. | : | Flammable liquids |
| Org. Perox. | : | Organic peroxides |
| Skin Corr. | : | Skin corrosion |
| Skin Irrit. | : | Skin irritation |
| Skin Sens. | : | Skin sensitisation |
| STOT RE | : | Specific target organ toxicity - repeated exposure |
| STOT SE | : | Specific target organ toxicity - single exposure |

| | | |
|---|---|---|
| DE TRGS 900 | : | Germany. TRGS 900 - Occupational exposure limit values. |
| DE TRGS 900 / AGW | : | Time Weighted Average |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

| | | |
|---|---|---|
| Sources of key data used to compile the Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/ |

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| Eye Dam. 1 | H318 | Calculation method |
| Skin Sens. 1 | H317 | Calculation method |

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be

considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

DE / EN